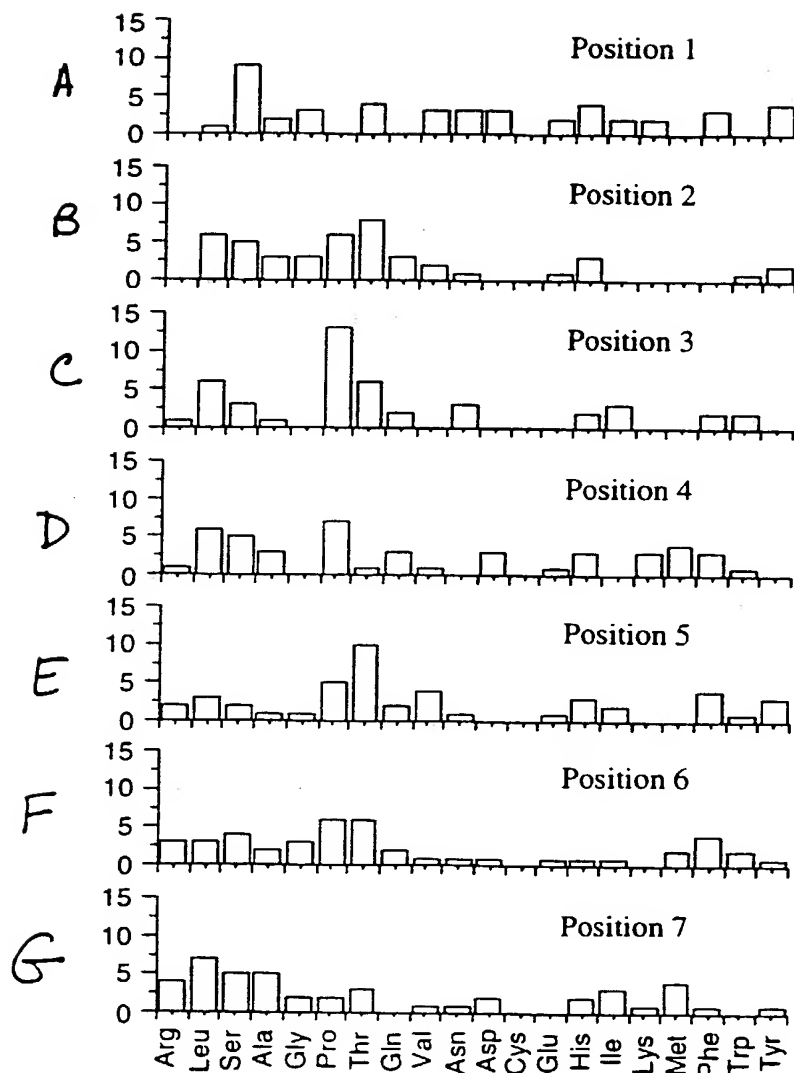




1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Figure 1





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Sequences 1-40 (some did not sequence) panning 3 exp: 1

His Thr Thr Val Tyr Gly Ala Gly
CAT ACG ACT GTT TAT GGG GCT GGT

Thr Glu Thr Pro Tyr Pro Thr Gly
ACT GAG ACG CCT TAT CCT ACT GGT

Leu Thr Thr Pro Phe Ser Ser Gly
CTT ACT ACT CCG TTT TCG TCG GGT

Gly Val Pro Leu Thr Met Asp Gly
GGT GTG CCT CTT ACG ATG GAT GGT

Lys Leu Pro Thr Val Leu Arg Gly
AAG CTT CCG ACT GTT CTG CGG GGT

Cys Arg Phe His Gly Asn Arg Gly
TGT CGC TTT CAT GGG AAT CGT GGT

Tyr Thr Arg Asp Phe Glu Ala Gly
TAT ACT CGG GAT TTT GAG GCT GGT

Ser Ser Ala Ala Gly Pro Arg Gly
TCG TCG GCG GCT GGT CCG CGG GGT

Ser Leu Ile Gln Tyr Ser Arg Gly
TCT CTG ATT CAG TAT TCG AGG GGT

Asp Ala Leu Met Trp Pro UKN Gly
GAT GCT CTT ATG TGG CCT NTG GGT

Ser Ser UKN Ser Leu Tyr Ile Gly
TCG TCT CNT TCG TTG TAT ATT GGT

Phe Asn Thr Ser Thr Arg Thr Gly
TTT AAT ACT TCG ACG CGT ACG GGT

Thr Val Gln His Val Ala Phe Gly
ACT GTG CAG CAT GTT GCT TTT GGT

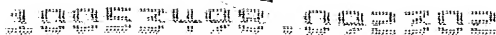
Asp Tyr Ser Phe Pro Pro Leu Gly
GAT TAT TCT TTT CCG CCT CTT GGT

Val Gly Ser Met Glu Ser Leu Gly
GTG GGG TCT ATG GAG TCG TTG GGT

Phe UKN Pro Met Ile UKN Ser Gly
TTT CAN CCG ATG ATT NGN TCG GGT

Ala Pro Pro Arg Val Thr Met Gly
GCG CCT CCG CGG GTT ACT ATG GGT

FIGURE 1H.

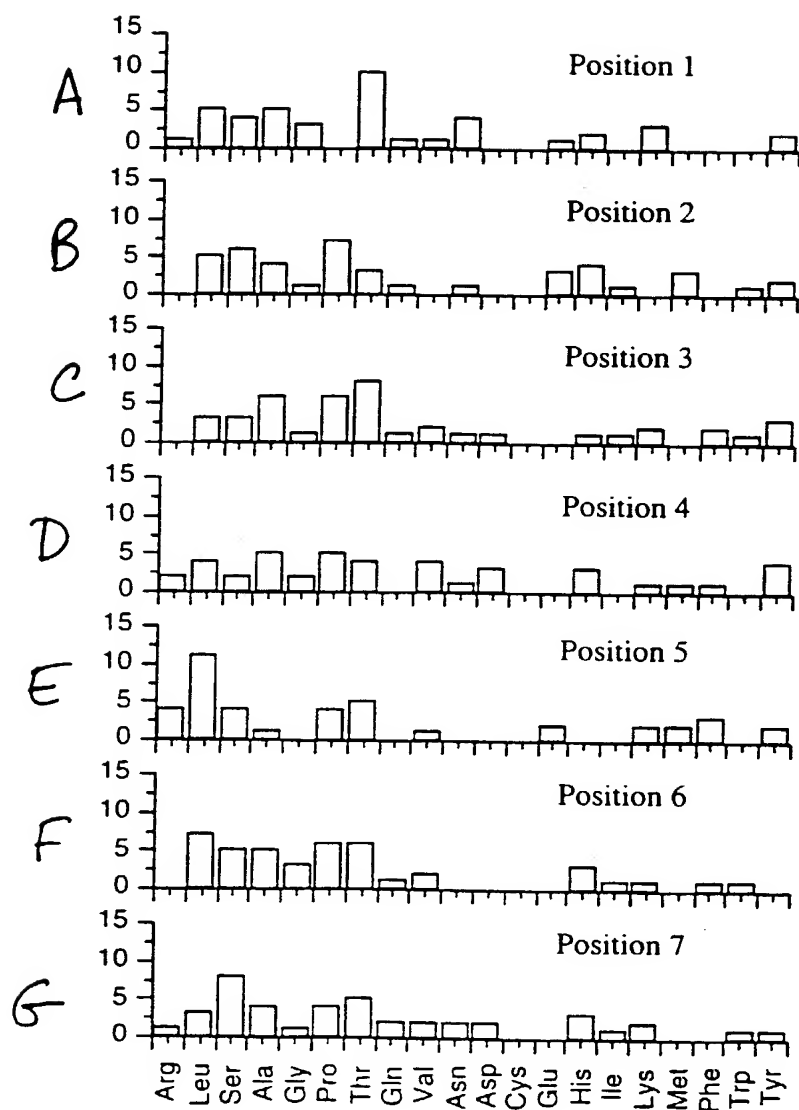


1 H (cont.)



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Figure 2





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Translated sequences 41-80 (not all sequenced) panning #3 expt #3

Thr Leu Pro His Arg Leu Asn Gly
ACT CTG CCT CAT CGT CTG AAT GGT

Ser Ser Pro Arg Glu Val His Gly
TCG AGT CCG AGG GAG GTT CAT GGT

Asn Gln Val Asp Thr Ala Arg Gly
AAT CAG GTT GAT ACG GCT CGG GGT

Tyr Pro Thr Pro Leu Leu Thr Gly
TAT CCT ACG CCG CTG CTG ACT GGT

His Pro Ala Ala Phe Pro Trp Gly
CAT CCT GCT GCT TTT CCT TGG GGT

Leu Leu Pro His Ser Ser Ala Gly
CTT CTT CCG CAT TCT AGT GCT GGT

Leu Glu Thr Tyr Thr Ala Ser Gly
CTT GAG ACT TAT ACG GCT TCT GGT

Lys Tyr Val Pro Leu Pro Pro Gly
AAG TAT GTG CCT CTG CCG CCG GGT

Ala Pro Leu Ala Leu His Ala Gly
GCG CCG TTG GCT CTG CAT GCG GGT

Tyr Glu Ser Leu Leu Thr Lys Gly
TAT GAG TCG CTG CTG ACT AAG GGT

Ser His Ala Ala Ser Gly Thr Gly
TCT CAT GCG GCT TCT GGT ACT GGT

Gly Leu Ala Thr Val Lys Ser Gly
GGT TTG GCG ACT GTT AAG TCT GGT

Gly Ala Thr Ser Phe Gly Leu Gly
GGT GCT ACG TCT TTT GGG CTT GGT

Lys Pro Pro Gly Pro Val Ser Gly
AAG CCG CCT GGG CCG GTG TCG GGT

Thr Leu Tyr Val Ser Gly Asn Gly
ACT CTT TAT GTT TCT GGG AAT GGT

His Ala Pro Phe Lys Ser Gln Gly
CAT GCT CCG TTT AAG TCT CAG GGT

Val Ala Phe Thr Arg Leu Pro Gly
GTG GCG TTT ACG CCG CTT CCG GGT

FIGURE 2H.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Leu	Pro	Thr	Arg	Thr	Pro	Ala	Gly
CTG	CCG	ACT	CGT	ACG	CCG	GCT	GGT
Ala	Ser	Phe	Asp	Leu	Leu	Ile	Gly
GCG	AGT	TTT	GAT	CTT	TTG	ATT	GGT
Arg	Met	Asn	Thr	Glu	Pro	Pro	Gly
CGG	ATG	AAT	ACT	GAG	CCT	CCG	GGT
Lys	Met	Thr	Pro	Leu	Thr	Thr	Gly
AAG	ATG	ACT	CCT	CTG	ACG	ACT	GGT
Ala	Asn	Ala	Thr	Pro	Leu	Leu	Gly
GCG	AAT	GCG	ACG	CCT	CTG	CTG	GGT
Thr	Ile	Trp	Pro	Pro	Pro	Val	Gly
ACT	ATT	TGG	CCT	CCG	CCT	GTT	GGT
Gln	Thr	Lys	Val	Met	Thr	Thr	Gly
CAG	ACT	AAG	GTG	ATG	ACG	ACG	GGT
Asn	His	Ala	Val	Phe	Ala	Ser	Gly
AAT	CAT	GCT	GTT	TTT	GCT	AGT	GGT
Leu	His	Ala	Ala	UKN	Thr	Ser	Gly
CTG	CAT	GCG	GCT	ANT	ACG	TCG	GGT
Thr	Trp	Gln	Pro	Tyr	Phe	His	Gly
ACG	TGG	CAG	CCG	TAT	TTT	CAT	GGT
Ala	Pro	Leu	Ala	Leu	His	Ala	Gly
GCG	CCG	TTG	GCT	CTG	CAT	GCG	GGT
Thr	Ala	His	Asp	Leu	Thr	Val	Gly
ACG	GCG	CAT	GAT	CTG	ACT	GTT	GGT
Asn	Met	Thr	Asn	Met	Leu	Thr	Gly
AAT	ATG	ACT	AAT	ATG	CTT	ACT	GGT
Gly	Ser	Gly	Leu	Ser	Gln	Asp	Gly
GGT	TCT	GGG	CTG	TCT	CAG	GAT	GGT
Thr	Pro	Ile	Lys	Thr	Ile	Tyr	Gly
ACG	CCG	ATT	AAG	ACG	ATT	TAT	GGT
Ser	His	Leu	Tyr	Arg	Ser	Ser	Gly
TCG	CAT	CTG	TAT	CGT	TCT	AGT	GGT

2H (cont)



Patent & Trademark Office

Figure 3A

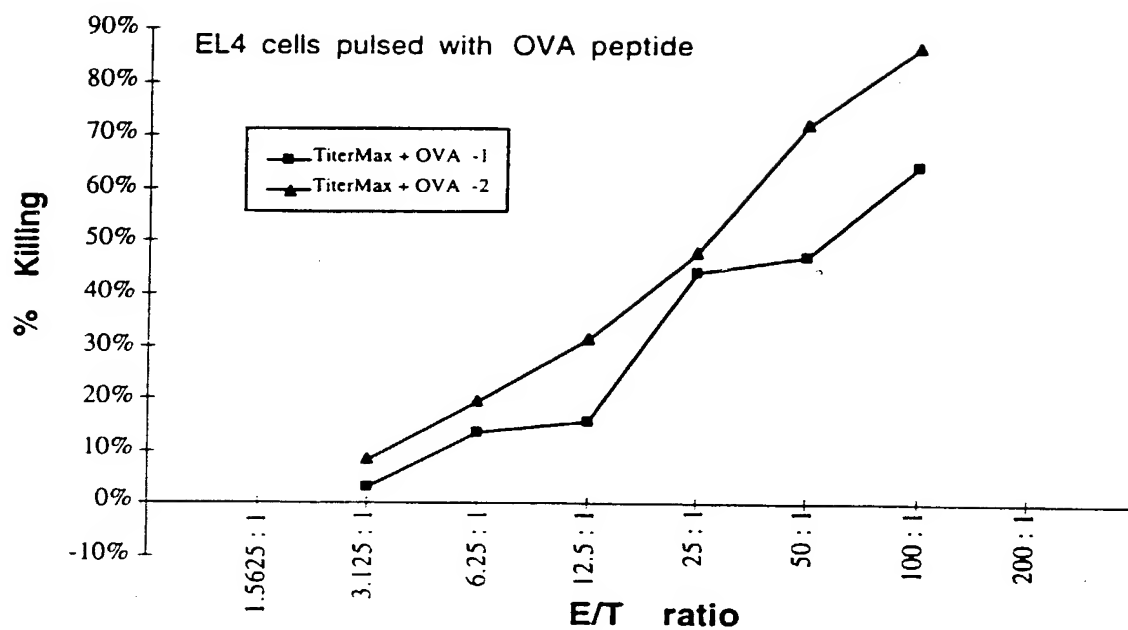
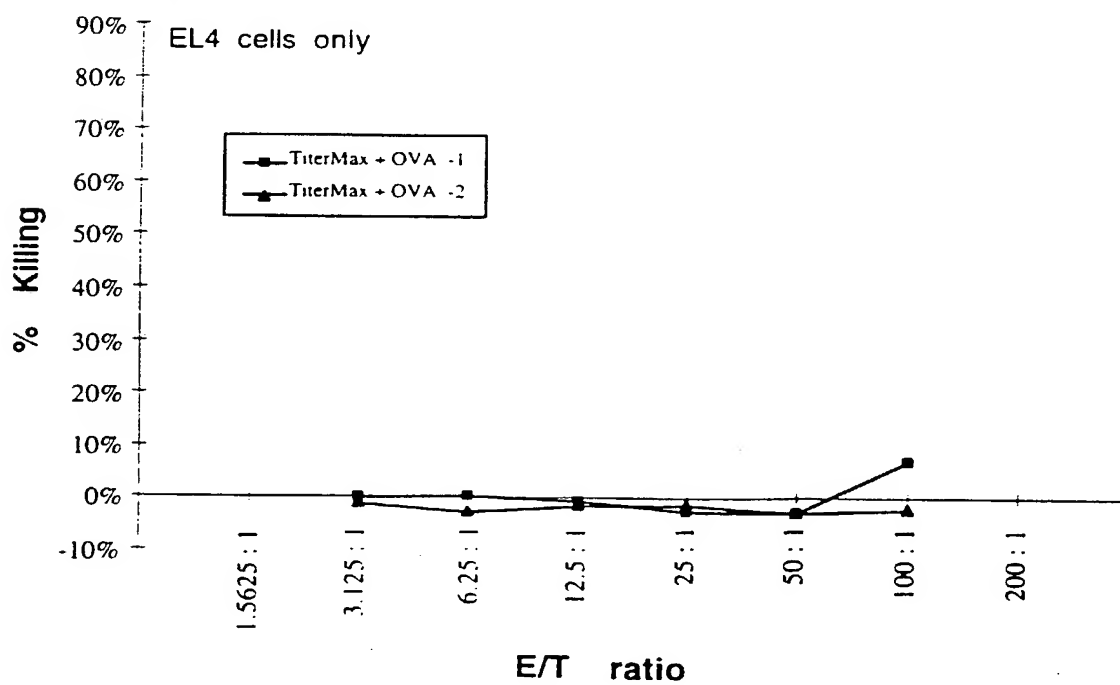
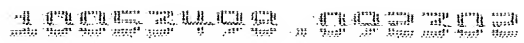


Figure 3B





EL4 cells pulsed with OVA peptide

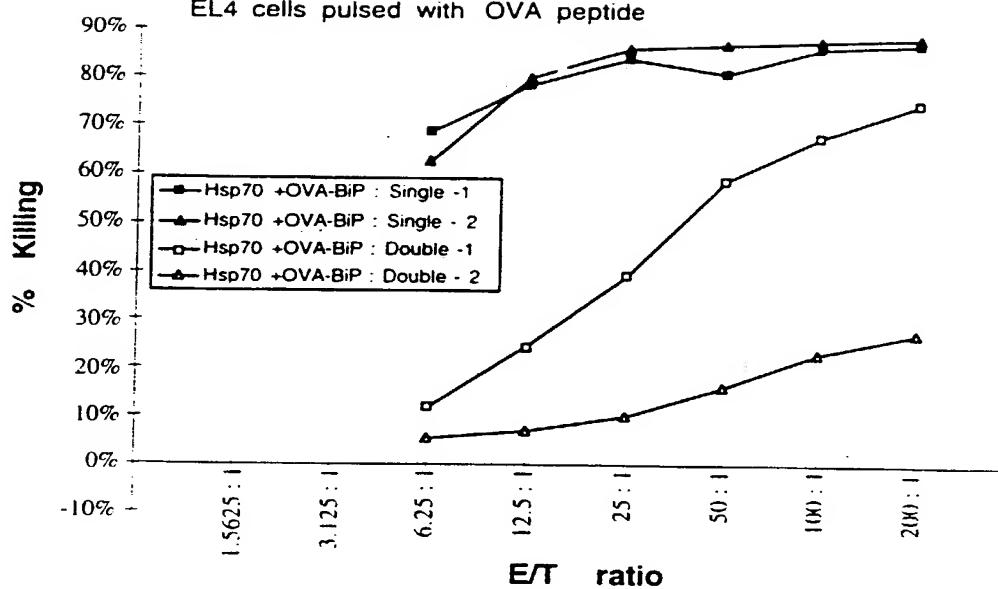
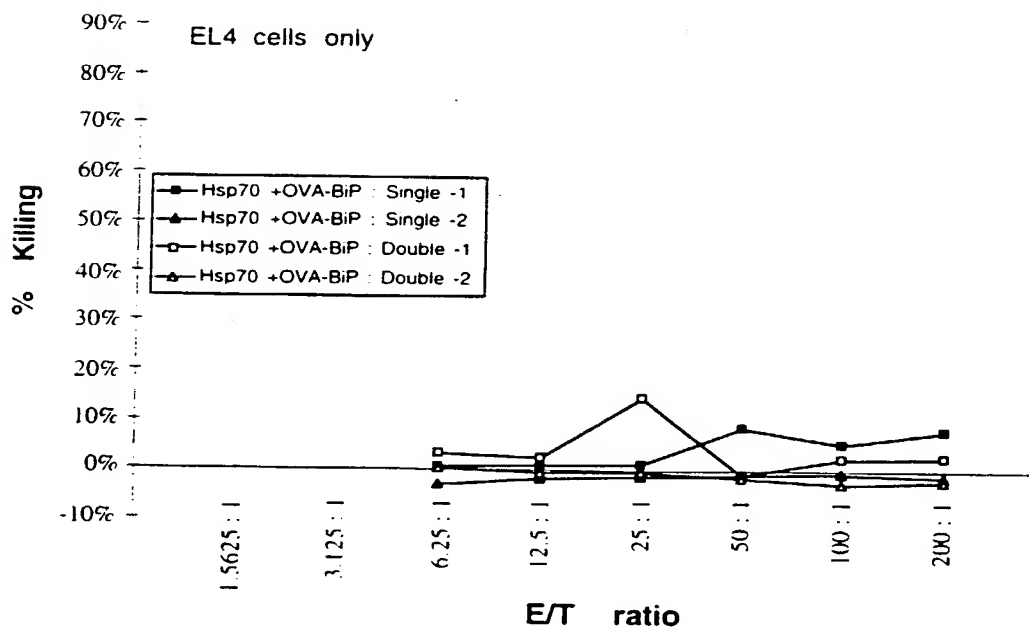


Figure 4B



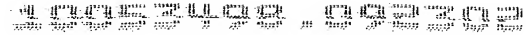


Figure 5A

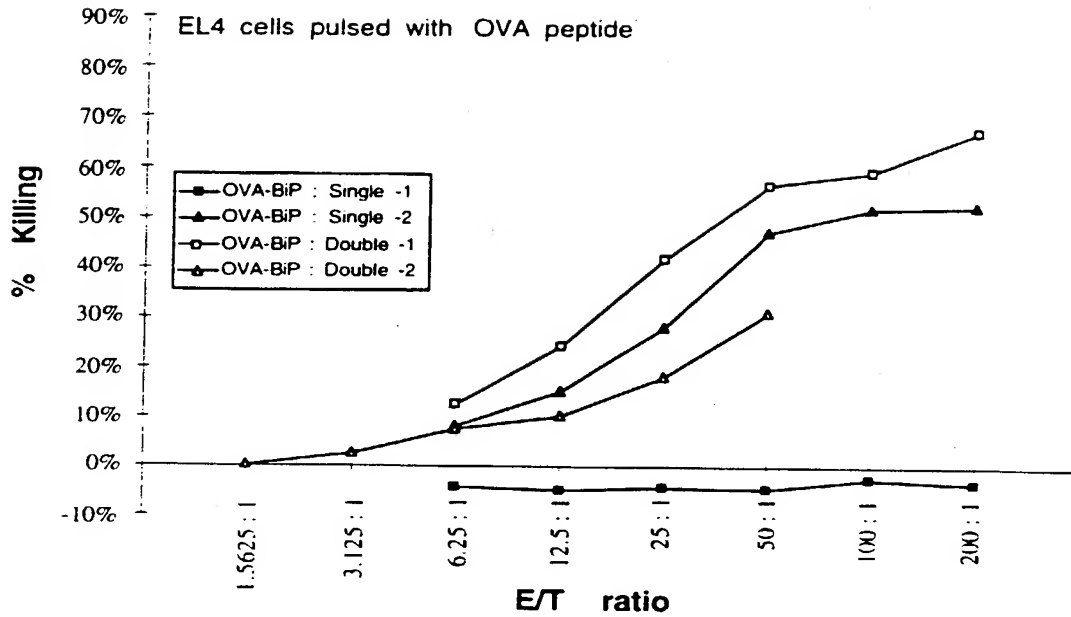
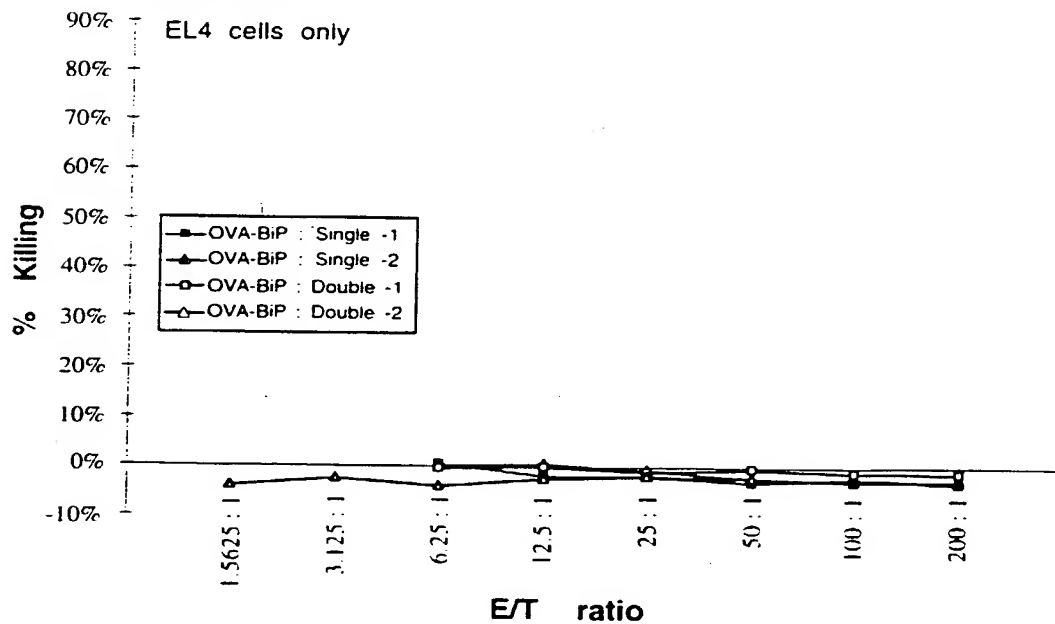


Figure 5B





Patent & Trademark Office

Figure 6A

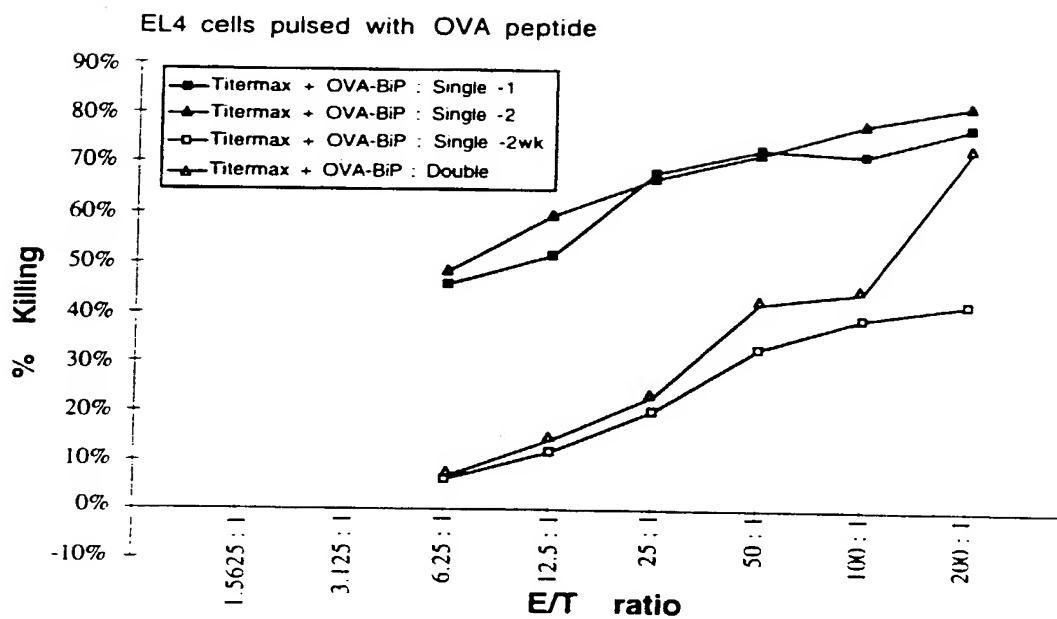
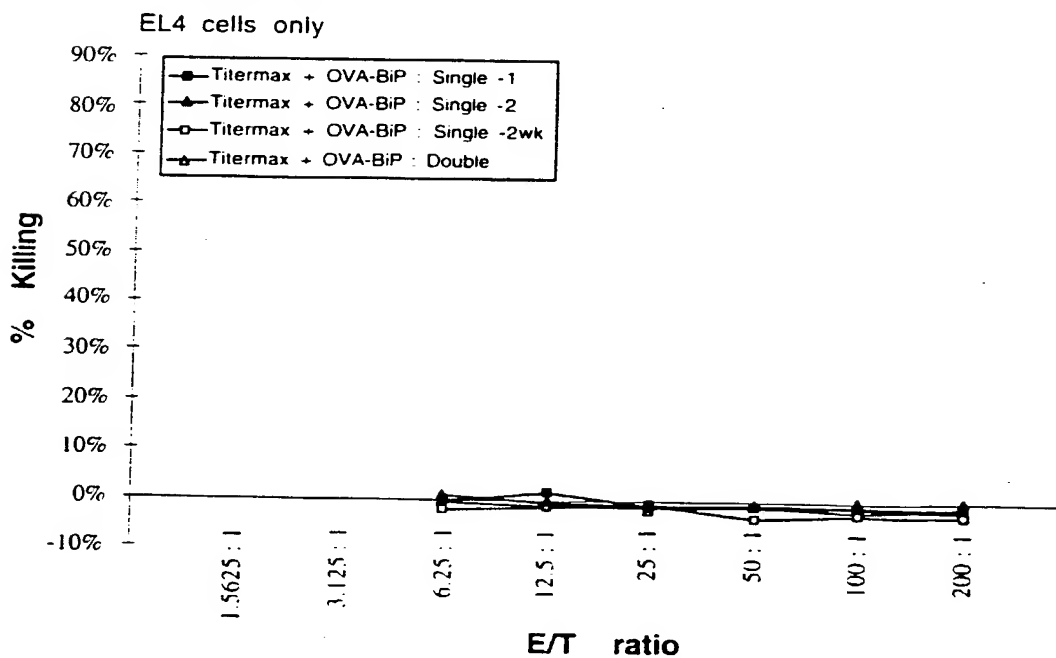


Figure 6B



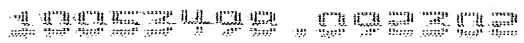
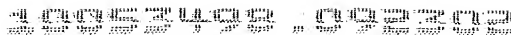


FIGURE 7



MSJ

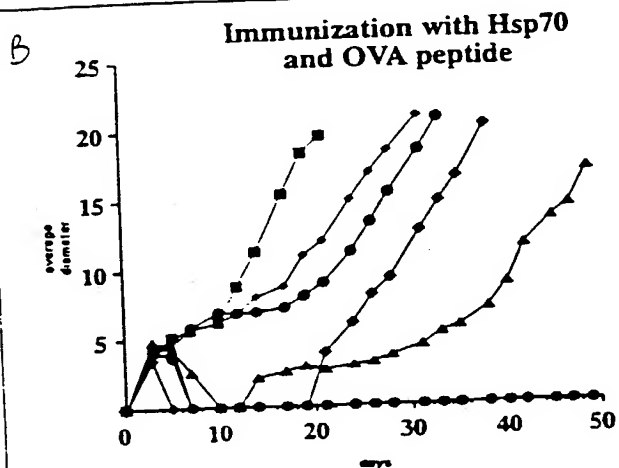
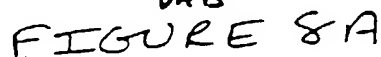
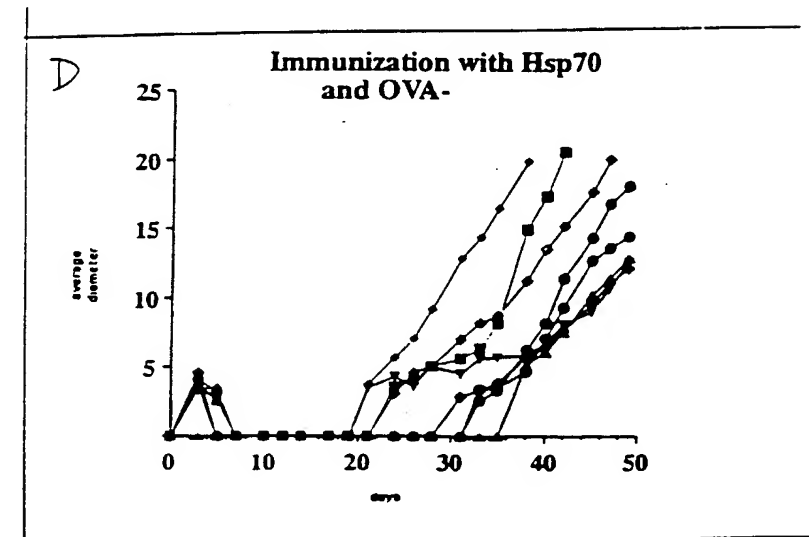
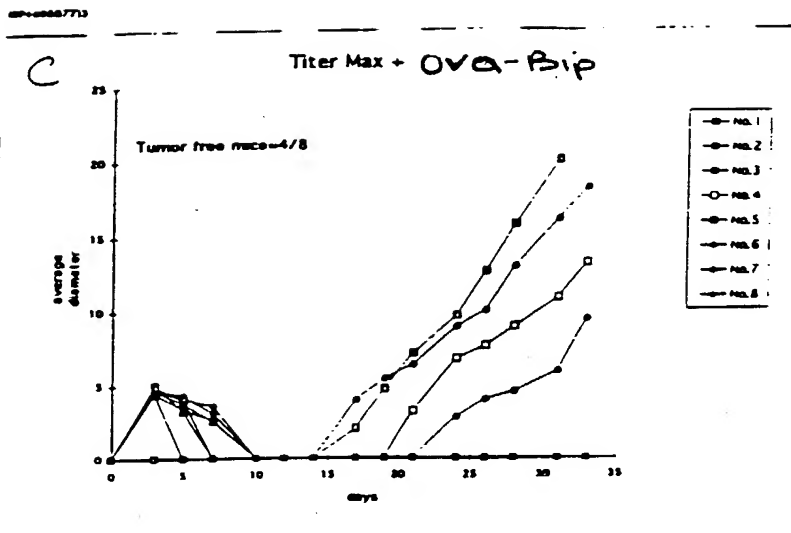
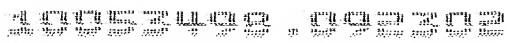
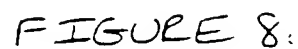
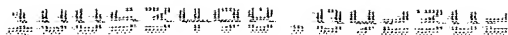
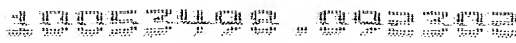


FIGURE 8B







Group	Days (approx.)
OVA peptide	2.5
Titermax + OVA	13.0
Hsp70 + OVA	11.5
Hsp70 + OVA-BiP	25.5

FIGURE 8(H)

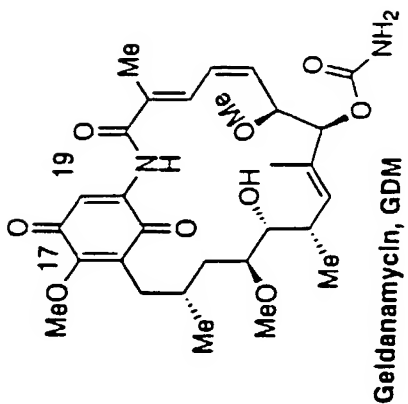
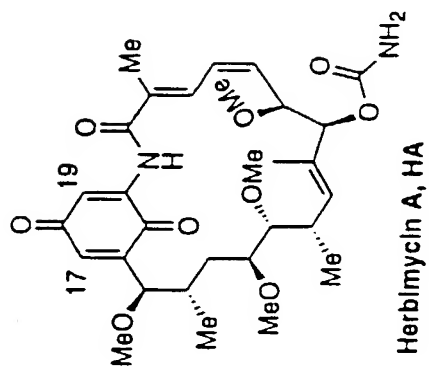


Figure 9A

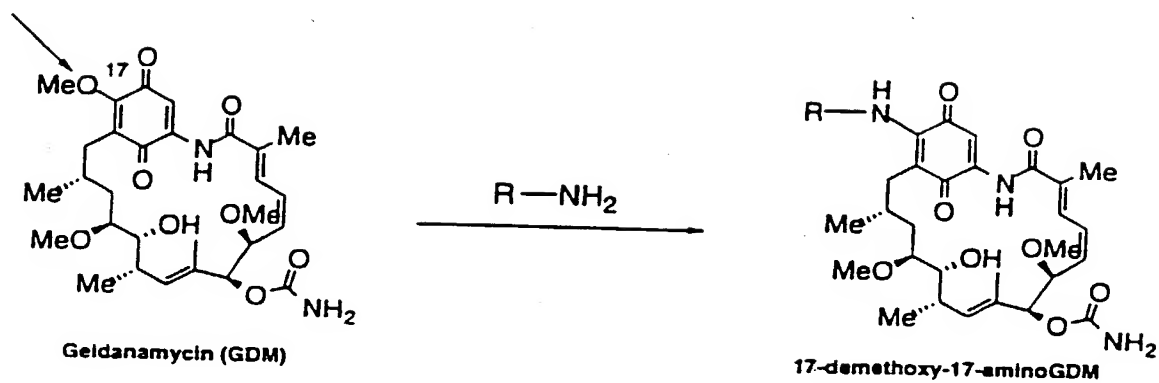
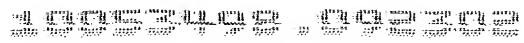


FIGURE 9B

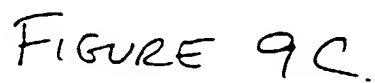
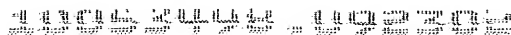
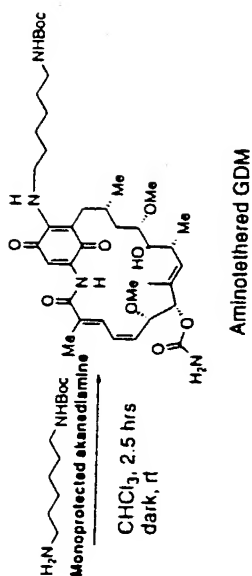
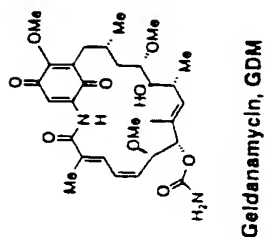
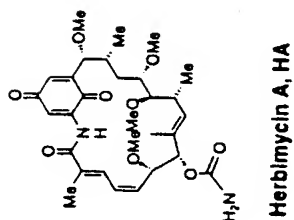




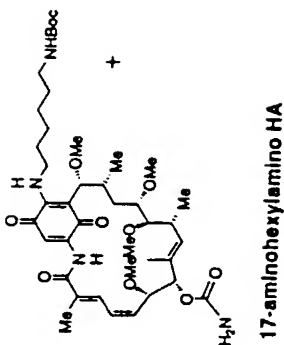
Figure 9D.



Monoprotected alkanediamine
CHCl₃, 2.5 hrs
dark, rt



H₂N-CH₂-CH₂-CH₂-CH₂-CH₂-CH₂-NH-Boc
CHCl₃, 40°C, dark



19-aminoherbimycin HA

FIGURE 10 A-B

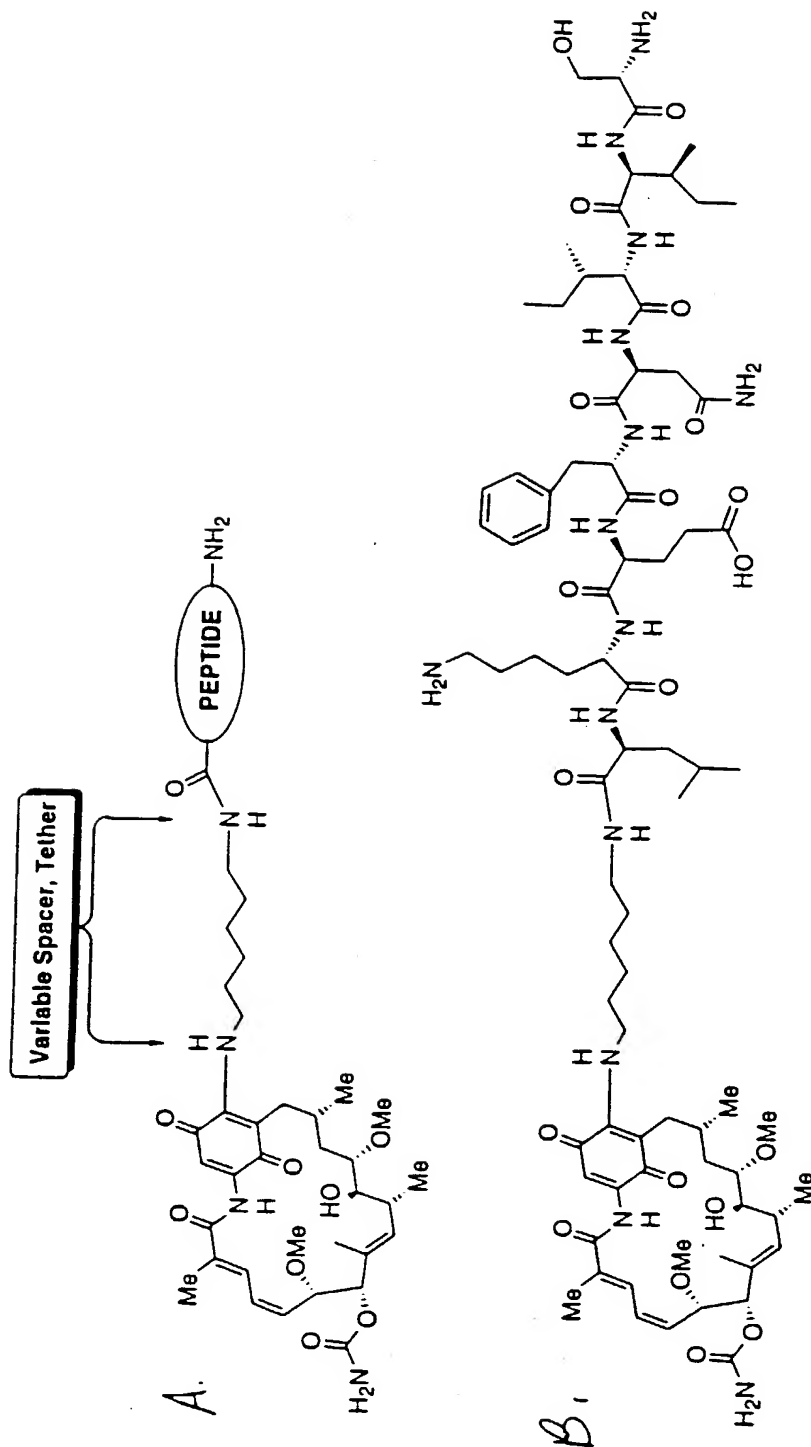
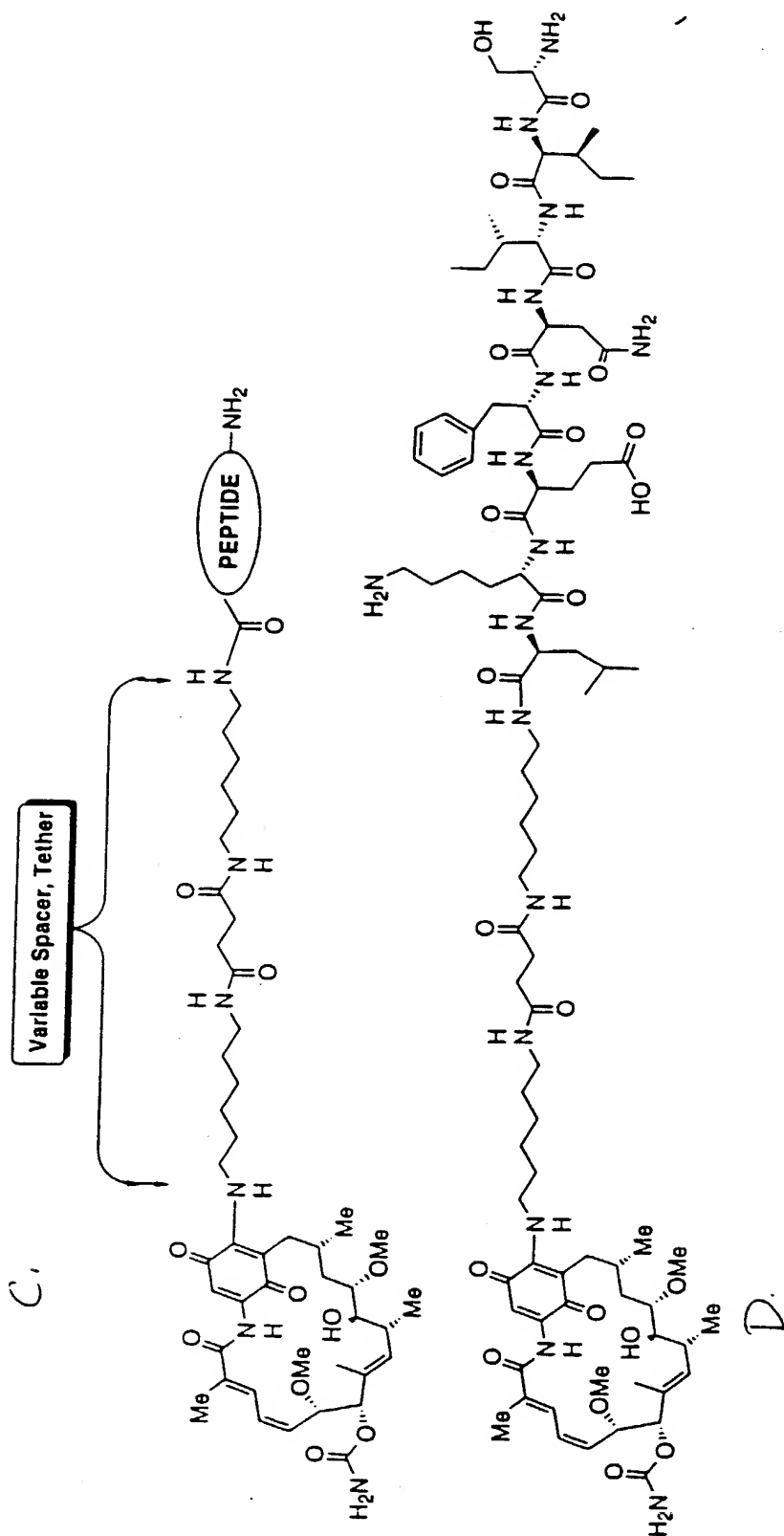




FIGURE 10 c-d



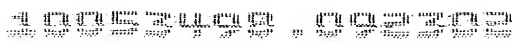


FIGURE 10 E-F

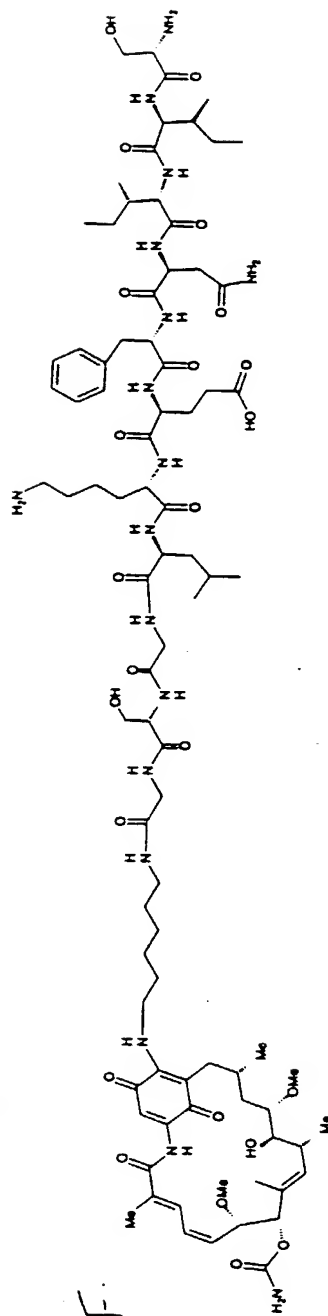
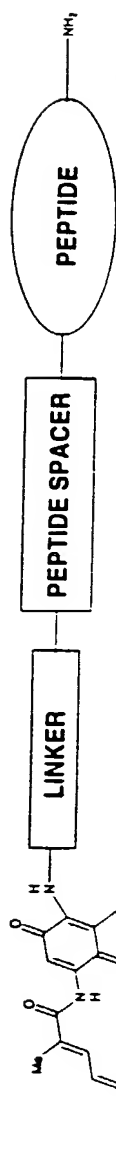




FIGURE 11 A+B

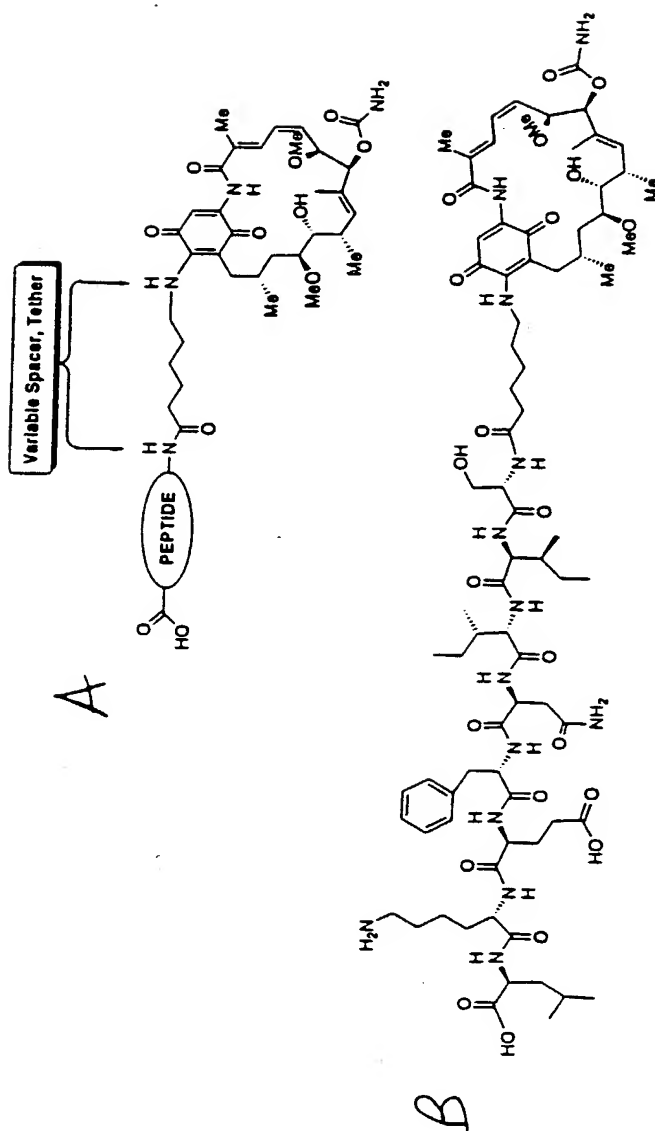
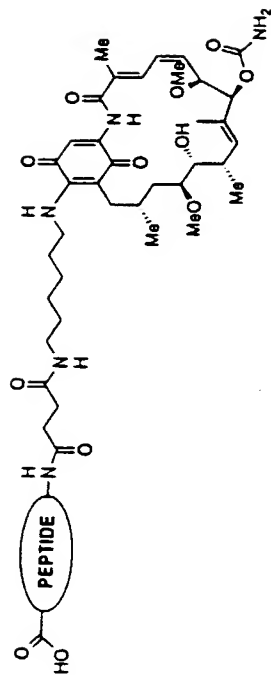
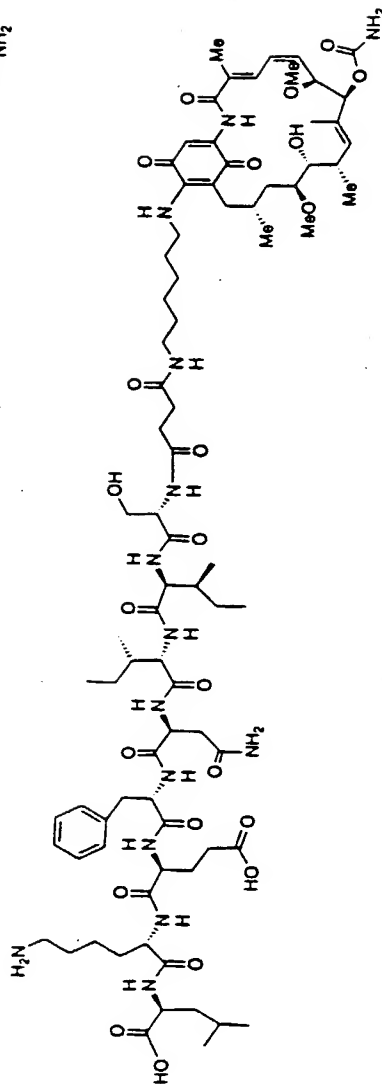


FIGURE 11C-D.

C



D



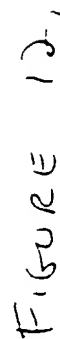


FIGURE 12.

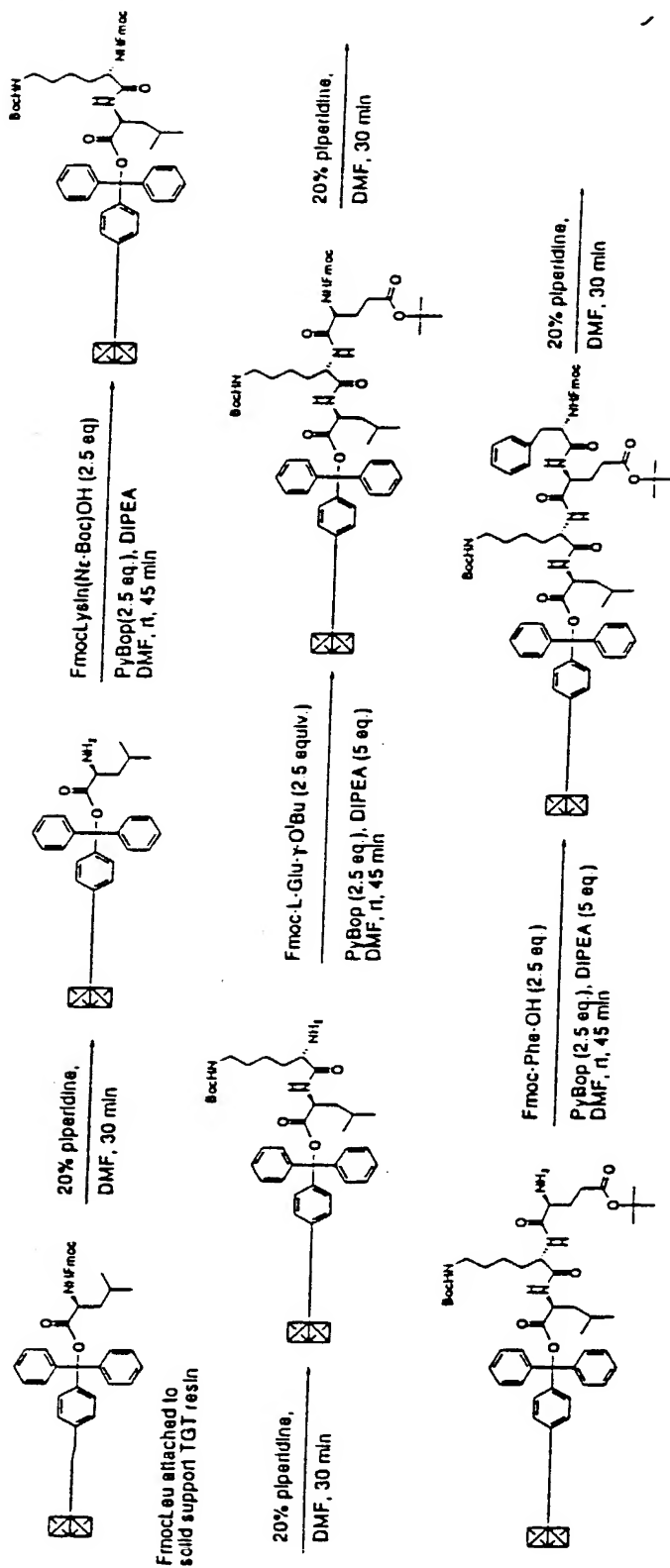
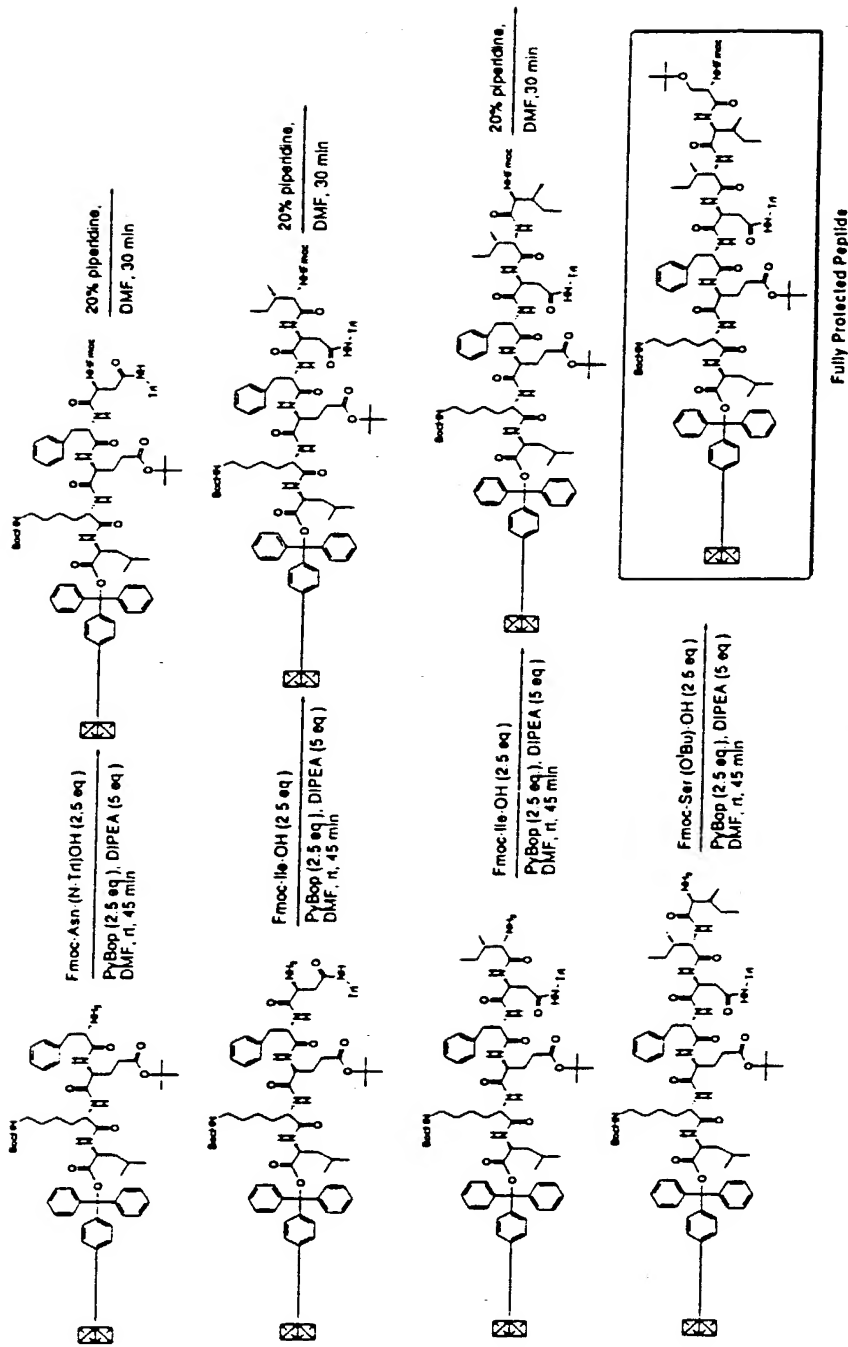
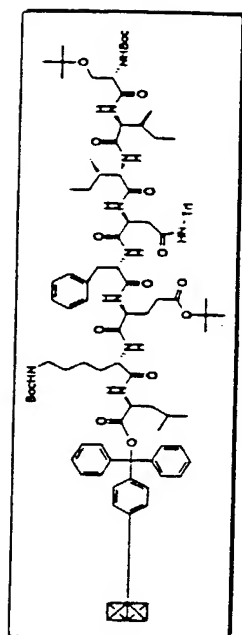
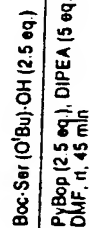


FIGURE 13 A

FIGURE 13B





Fully Protected Peptide

FIGURE 14A

1416

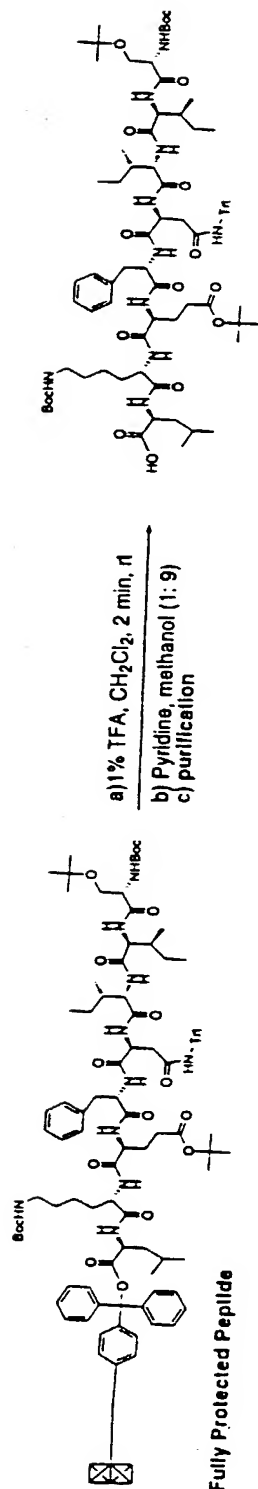
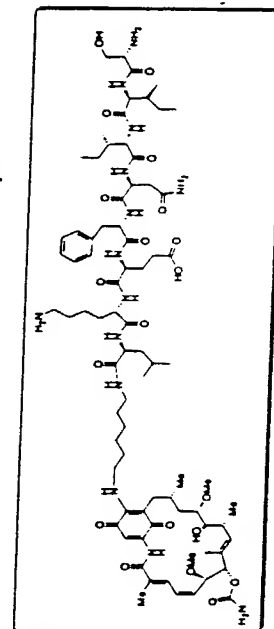
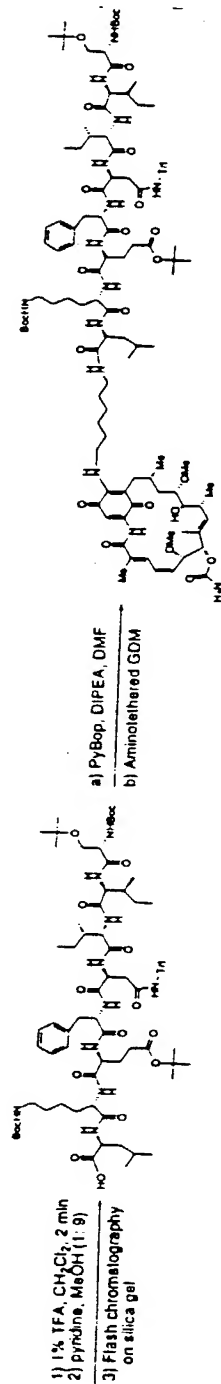
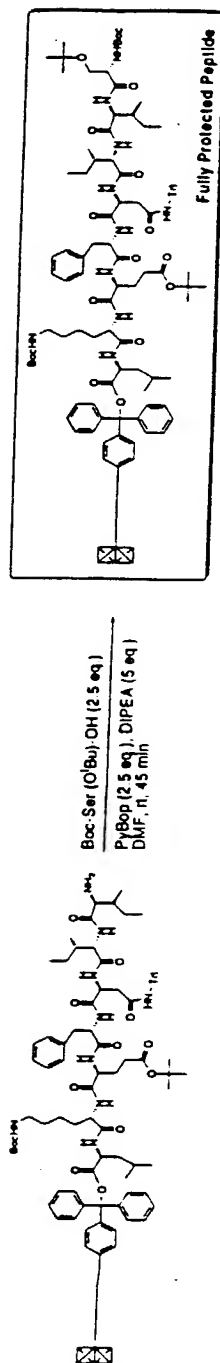
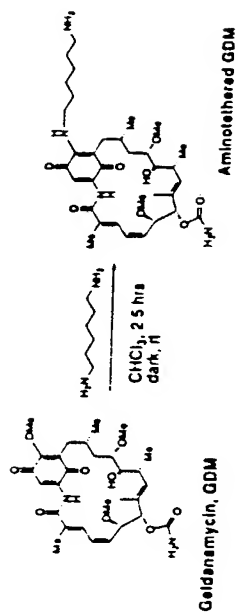


FIGURE 14B

FIGURE 15.



Fully Protected Peptide

peptide with terminal amine free

20% piperidine
DMF, 20 min., rt

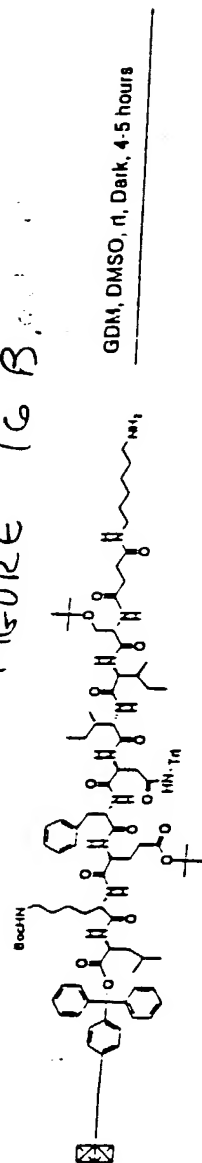
50% TFA
CH₂Cl₂

peptide with terminal amine free

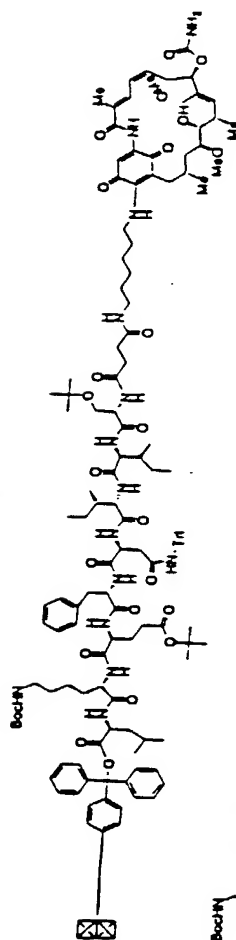
a) PyBop (2.5 eq.), DIPEA
DMF, rt, 5 min.

b) peptide with terminal amine free

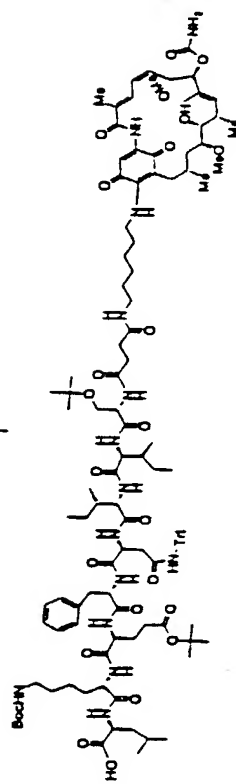
FIGURE 16B



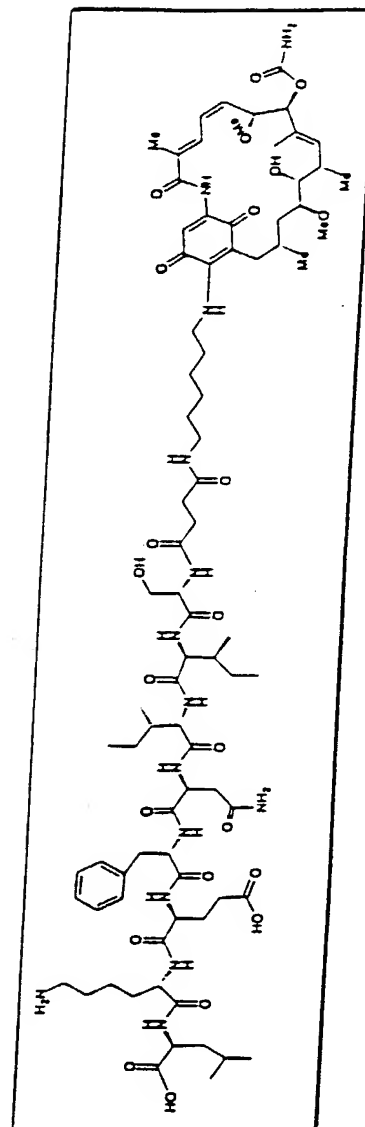
GDM, DMSO, rt, Dark, 4-5 hours

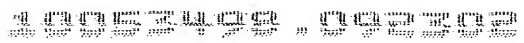


1) 1% TFA, CH₂Cl₂
 2) Pyridine, methanol (1:8)
 3) silica gel chromatography



a) 50% TFA, 40% CH₂Cl₂, 10% TIPS
 b) Purification







1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

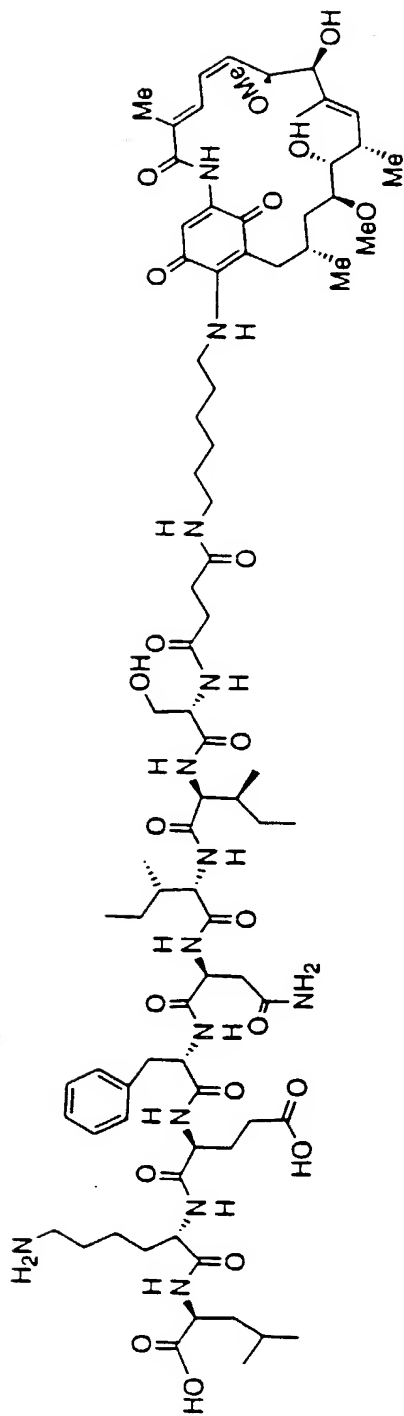


Figure 17B.

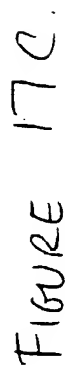


FIGURE 17C.



11

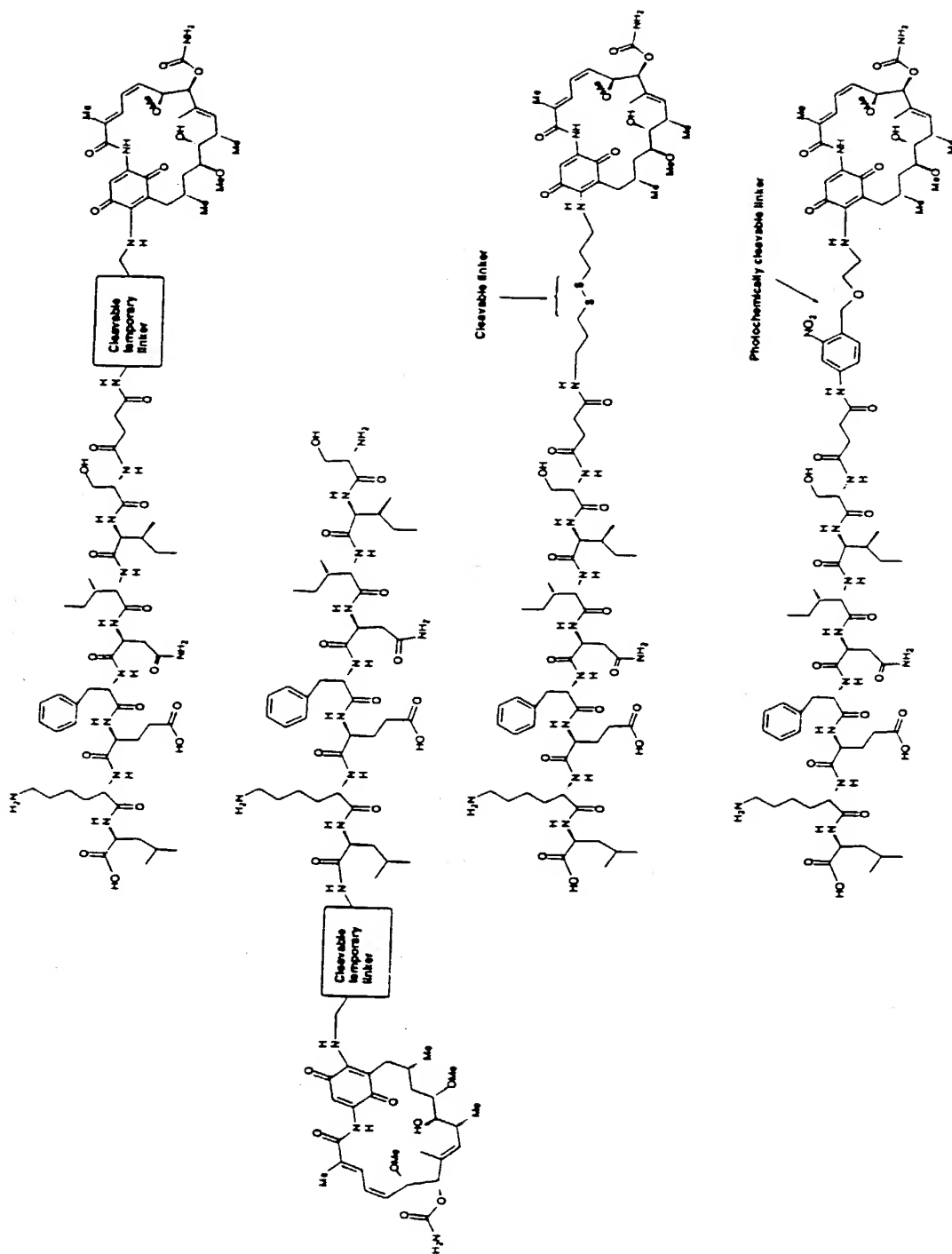
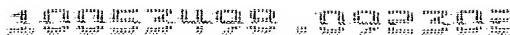
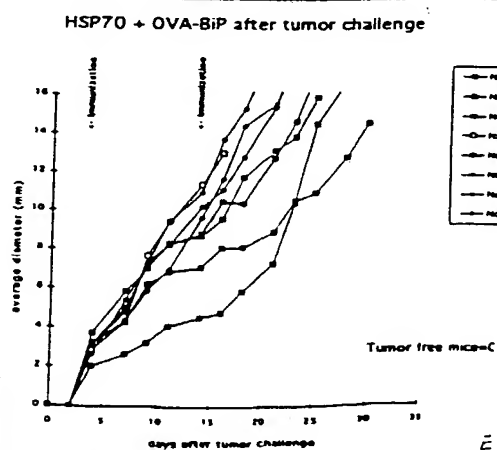
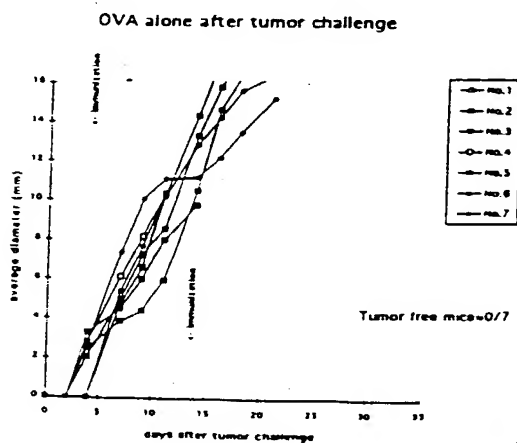
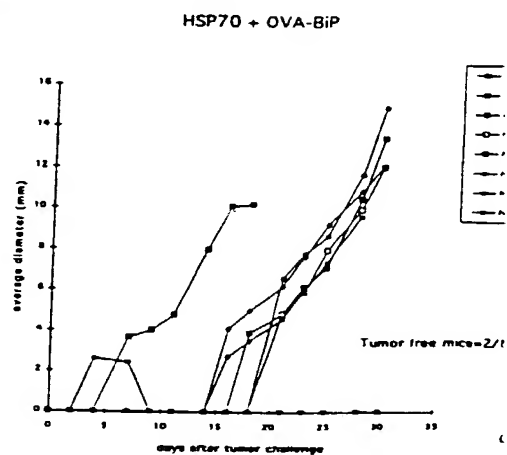
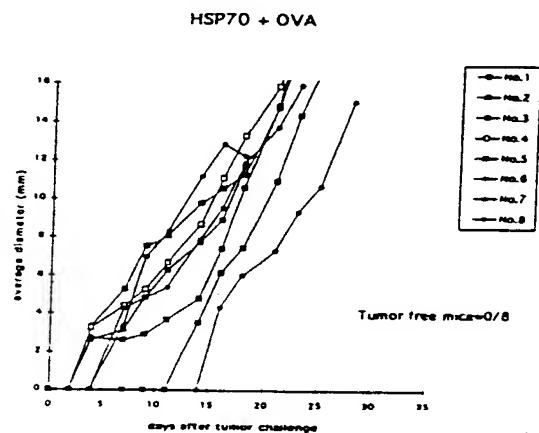


FIGURE 18



Immunization 7
6/4 challenge
1x10⁶ MO4

FIGURE 19A-E



4. 11. 1941

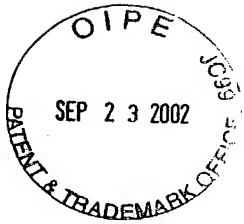
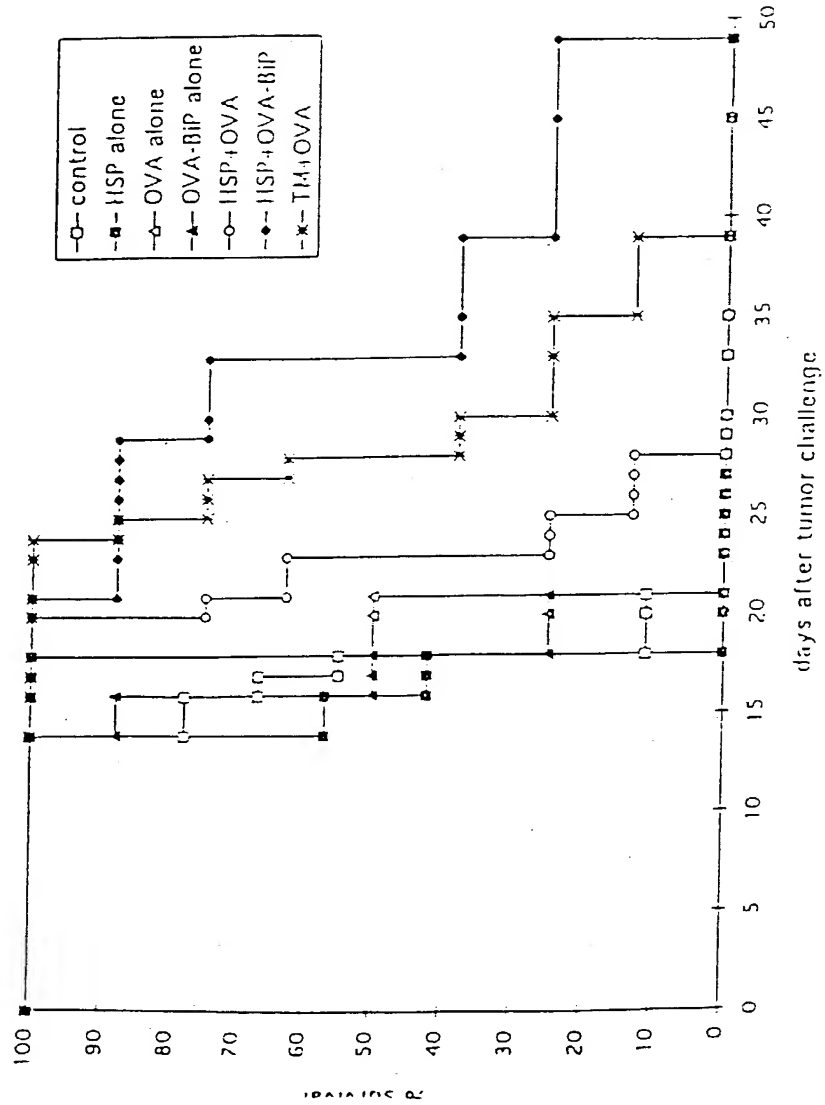


Figure 19 F.

Survival ratio of mice immunized 7 days before challenge with melanoma cells



Survival ratio of mice immunized 7 & 14 days after challenge with melanoma cells

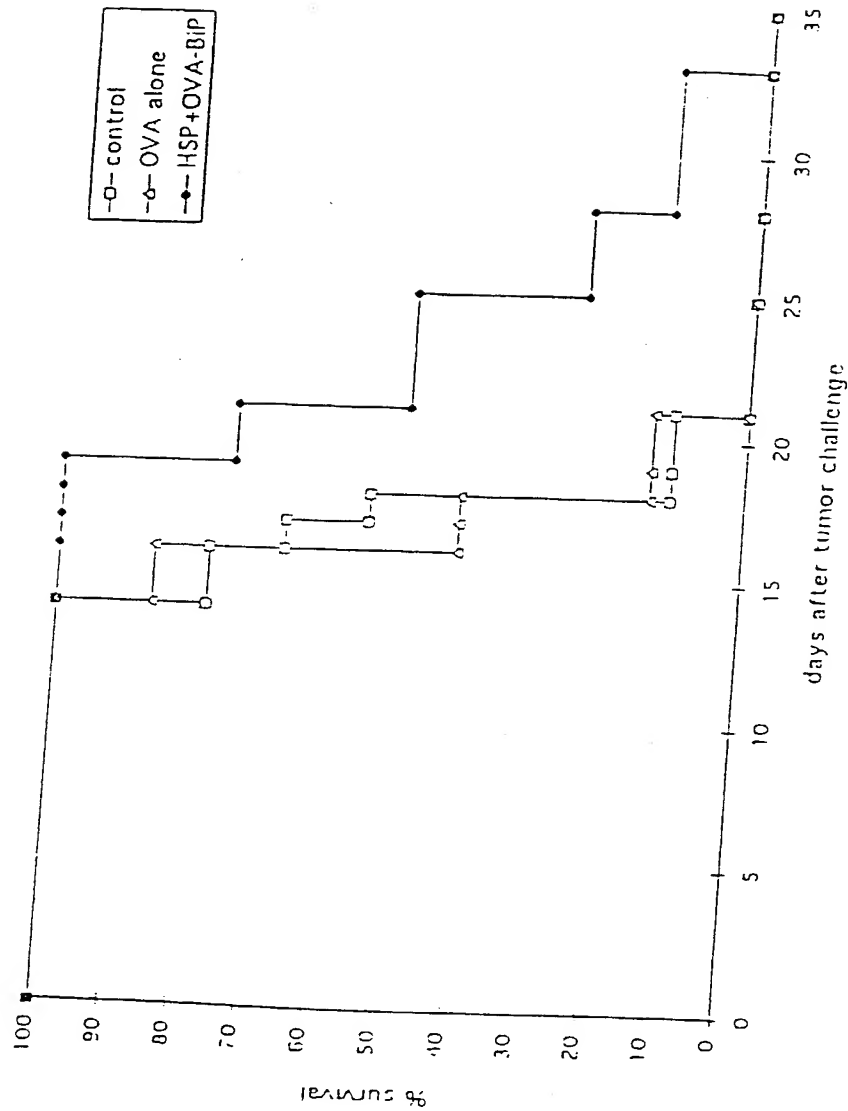


FIGURE 19G.

